

HAMAMATSU

TENTATIVE DATA

Feb. 1990

LOW PULSE NOISE PIN SILICON PHOTODIODE S3279

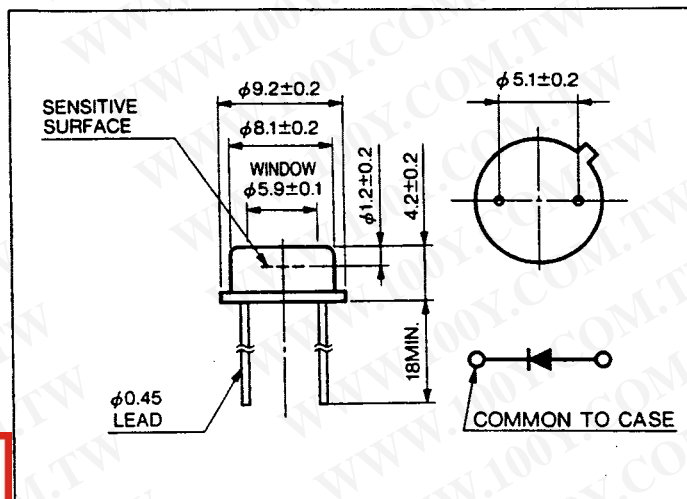
FOR HIGH PRECISION PHOTOMETRIC SYSTEMS
VERY LOW PULSE NOISE, FAST TIME RESPONSE, WIDE SPECTRAL RESPONSE

FEATURES

- Very low pulse noise: less than 1 pulse/h
- Fast time response: $t_r=1.5\text{ns}$ ($V_R=15\text{V}$)
- Low bias operation: 10V
- Sensitive area: 3mm dia.
- Wide spectral response: 200 - 1000nm
- High reliability: TO-5 package

APPLICATIONS

- High-speed pulse detection
- High precision photometric system



勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

GENERAL RATINGS

Parameters	Symbols	Ratings	Units
Spectral Response	λ	200 to 1000	nm
Peak Response Wavelength	λ_p	800	nm
Effective Sensitive Area	A	3 dia.	mm
Package	-	2-pin TO-5	-
Window Material	-	Quartz	-

MAXIMUM RATINGS

Parameters	Symbols	Ratings	Units
Reverse Voltage	V_R	30	V
Power Dissipation	P	50	mW
Operating Temperature	T_{opr}	-20 to +60	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-55 to +100	$^{\circ}\text{C}$

CHARACTERISTICS ($T_a=25^{\circ}\text{C}$)

Parameters	Symbols	Conditions	Min.	Typ.	Max.	Units
Radiant Sensitivity	R	$\lambda = 633\text{nm}$	0.35	0.42	-	A/W
		$\lambda = 780\text{nm}$	0.40	0.48	-	A/W
Short Circuit Current	I_{sh}	100lux, 2856K	3.5	4.5	-	μA
Dark Current	I_d	$V_R=15\text{V}$	-	0.2	1.0	nA
Noise Current	I_N	$V_R=15\text{V}$, see Fig.4	-	0.02	-	pA
Junction Capacitance	C_j	$V_R=15\text{V}$, $f=1\text{MHz}$	-	35	50	pF
Rise Time	t_r	$V_R=15\text{V}$, $R_L=50\ \Omega$, $\lambda = 820\text{nm}$ delta-function	-	1.5	-	ns

PIN SILICON PHOTODIODE S3279

Fig.1 Spectral Response

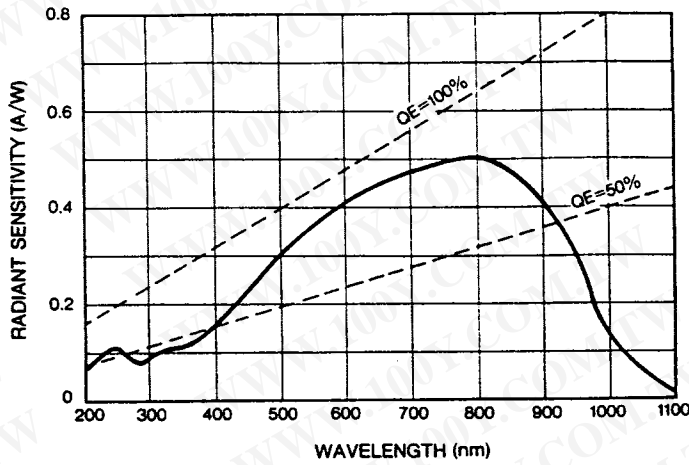


Fig.2 Junction Capacitance vs. Reverse Voltage

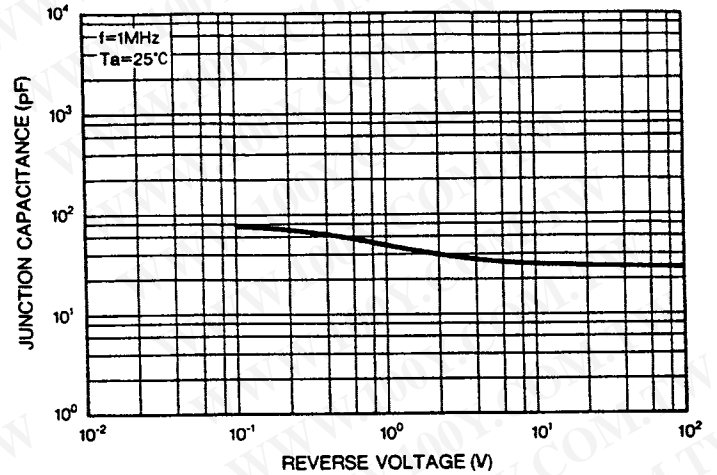


Fig.3 Dark Current vs. Reverse Voltage

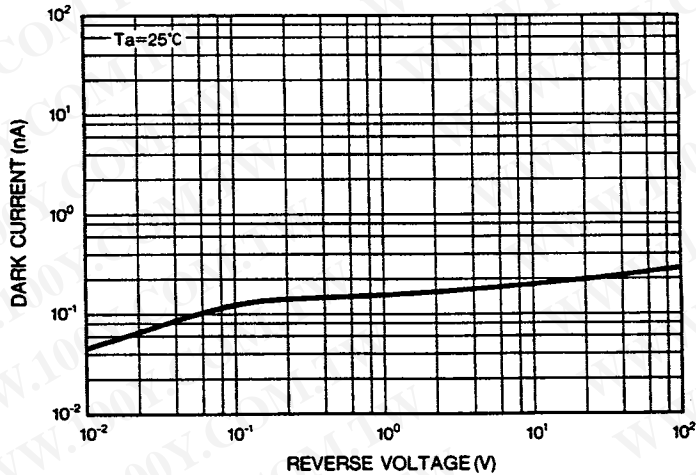
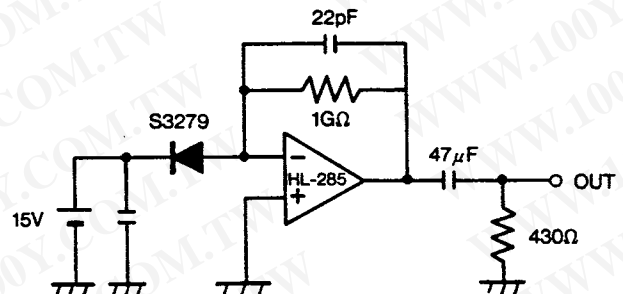


Fig.4 Noise Current Measurement Circuit



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